

CLAIMS

What is claimed:

1. An apparatus for isolating and leveling a machine foundation with respect to a substructure, comprising:

a rigid enclosure connectable to said machine foundation, and said enclosure having an upper portion and a lower portion; and

means for telescopically adjusting said upper portion and said lower portion of said enclosure to provide for various sizes of said enclosure and to provide a leveling adjustment of said machine foundation.

2. The apparatus stated in claim 1, wherein said telescopic adjusting means further comprises:

said upper portion of said enclosure having at least one flange having an aperture extending therethrough;

said lower portion of said enclosure having an anchor ring with at least one rod connected thereto and extending through said aperture in said flange of said upper portion; and

a slip joint connected to said flange of said upper portion for releasably connecting said rod to said flange.

3. The apparatus stated in claim 1, further comprising:

a bearing member disposed within said enclosure and adjustably connected to said lower portion of said enclosure; and

a support member positioned between and in contact with said bearing member and said substructure for isolating said machine foundation from said substructure.

4. The apparatus stated in claim 3, said support member further comprising:

a substantially cylindrical inner core fabricated from an elastomeric material;

and

an outer layer overlapping said inner core, and said outer layer fabricated from elastomer-coated cords to resist radial expansion of said inner core in response to compressive forces along a longitudinal axis of said support member.

5. The apparatus stated in claim 4, further comprising:

said outer layer fabricated from at least two layers of elastomer-coated cords integrally bonded layer-to-layer and to said inner core, and each layer of said elastomer-coated cords being substantially parallel to one another and extending at an angle to a longitudinal axis of said inner core.

6. The apparatus stated in claim 3, further comprising:

said support member fabricated from a high-strength, rigid material.

7. The apparatus stated in claim 3, further comprising:

said support member adaptable to be removably disposed between said bearing member and said substructure so that said support member may be replaced with other support members.

8. The apparatus stated in claim 3, said support member further comprising:
an inflatable air bag for adjustably supporting said machine foundation.

9. An apparatus for isolating and leveling a machine foundation with respect to a substructure, comprising:

a rigid enclosure connectable to said machine foundation, and said enclosure having an upper portion and a lower portion telescopically connected to one another to provide for telescopic adjustment of said enclosure;

a bearing member disposed within said enclosure and adjustably connected to said lower portion of said enclosure; and

a support member positioned between and in contact with said bearing member and said substructure for isolating said machine foundation from said substructure.

10. The apparatus stated in claim 9, wherein said support member further comprises:

a substantially cylindrical inner core fabricated from an elastomeric material;
and

an outer layer overlapping said inner core, and said outer layer fabricated from elastomer-coated cords to resist radial expansion of said inner core in response to compressive forces along a longitudinal axis of said resilient member.

11. The apparatus stated in claim 9, further comprising:

said inner core and said outer core having a height-to-width ratio of approximately 2:1 in an unstressed condition.

12. The apparatus stated in claim 10, further comprising:

said inner core having an aperture extending through said inner core and coaxially aligned with a longitudinal axis of said inner core.

13. The apparatus stated in claim 10, further comprising:

said inner core fabricated from rubber.

14. The apparatus stated in claim 10, further comprising:

said outer layer fabricated from at least two layers of said elastomer-coated cords integrally bonded layer-to-layer and to said inner core, and each layer of said elastomer-coated cords substantially parallel to one another and extending at an angle to a longitudinal axis of said inner core.

15. The apparatus stated in claim 9, further comprising:

said support member fabricated from a high-strength, rigid material.

16. The apparatus stated in claim 15, further comprising:

said support member fabricated from a steel I-beam structure.

17. The apparatus stated in claim 9, further comprising:

said support member adaptable to be removably disposed between said bearing member and said substructure so that said support member may be replaceable.

18. The apparatus stated in claim 9, said support member further comprising:

an inflatable air bag for adjustably supporting said machine foundation.

19. The apparatus stated in claim 18, further comprising:

a conduit coupled to and in communication with said air bag; and

said conduit communicatable with a pressurized air source for communicating pressurized air to and from said air bag.

20. The apparatus stated in claim 19, further comprising:

said conduit extending through said substructure and into said enclosure

wherein said conduit communicates with said air bag.